

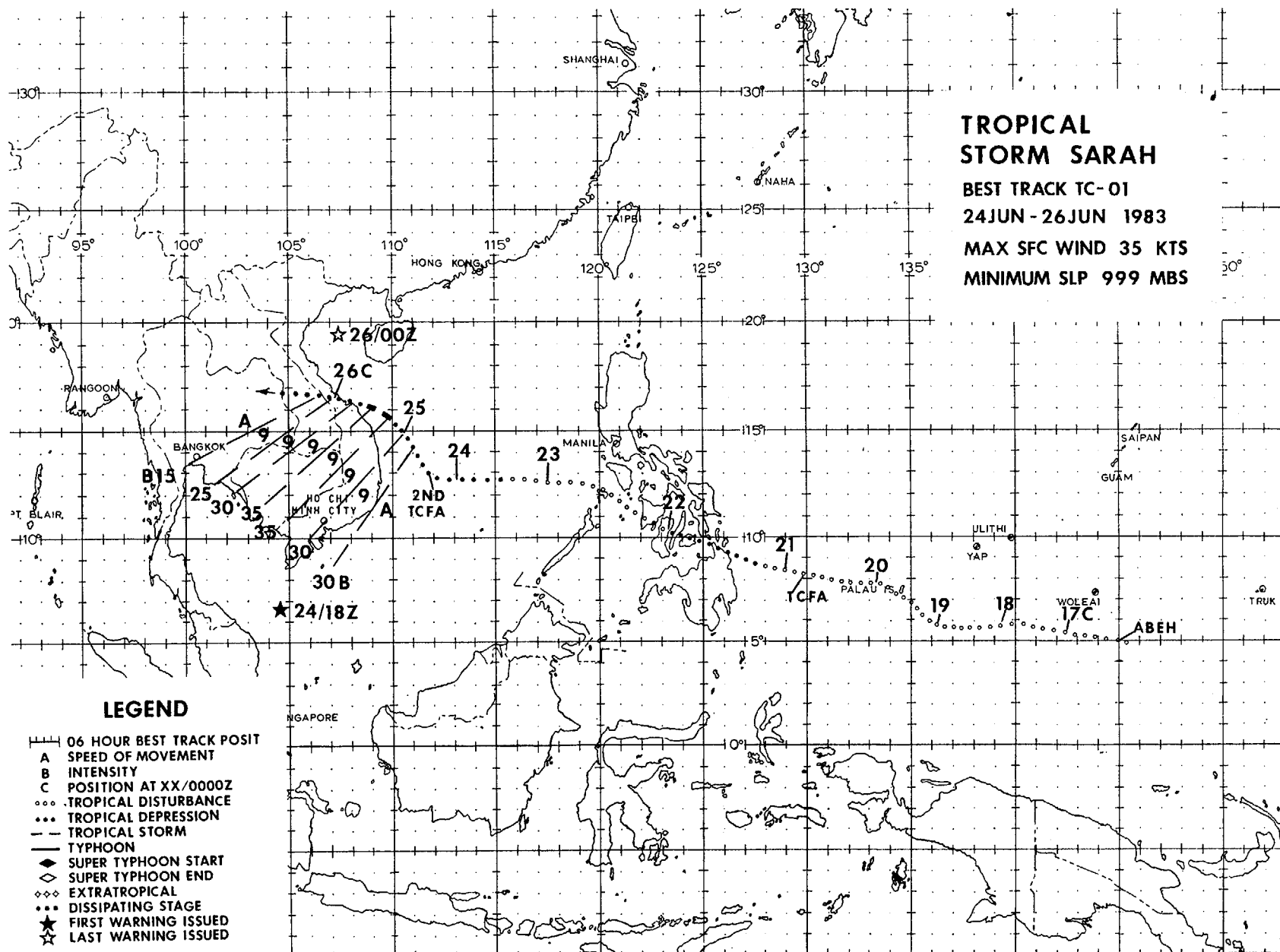
# TROPICAL STORM SARAH

BEST TRACK TC-01

24JUN - 26JUN 1983

MAX SFC WIND 35 KTS

MINIMUM SLP 999 MBS



## TROPICAL STORM SARAH (01W)

The formation of Tropical Storm Sarah in the South China Sea during late June marked the beginning of the 1983 tropical cyclone season for the northwestern Pacific. This was the latest season-opener since 1973 when JTWC issued its first warning of the year in July.

The disturbance that was to eventually spawn Sarah was first detected using satellite imagery on 16 June. It was described on that day in the Significant Tropical Weather Advisory (ABEH PGTW) as a poorly organized area of convection centered near 5N 145E.

An upper-level trough located 600 nm (1111 km) to the northwest contributed to the formation of an area of strong upper-level divergence which appeared to be associated with the convection. As the upper-level trough pushed westward over the next few days, the area of enhanced convection maintained its relative position to the southeast and moved west as well.

It was not until the 19th that a weak surface circulation became apparent from satellite imagery near 6N 136E in the low-level easterly flow. This circulation was located along the southern tip of a narrow band of heavy convection extending northward to near the position of the upper-level trough. As the circulation moved westward, the strongest area of convection remained well to the north. A TCFA was issued at 201930Z when it became apparent from satellite imagery that the convection had become more organized around the circulation and that an upper-level anticyclone had developed over the system. However, the ensuing daylight aircraft investigative mission, at 210025Z found only a weakly defined, 1009 mb surface circulation with winds in excess of 15 kt (8 m/s) observed only in the trade wind flow to the north of the circulation.

Convective activity associated with the circulation persisted and increased sharply as the circulation approached the northern tip of Mindanao. The system was continued

in alert status and monitored closely as it crossed the southern Philippines. Synoptic data during this interval indicated the presence of a weak 10-15 kt (5-8 m/s) disturbance which was difficult to track as it crossed the islands. The formation alert was cancelled at 220445Z when satellite imagery indicated that the system had lost its upper-level anticyclone and that its convection had broken up over the mountainous terrain.

Over the next two days the remaining weak surface circulation was observed moving westward into the South China Sea. Convection associated with the circulation was unorganized and strong upper-level northeasterly flow presented a shearing environment that was not considered favorable for further development.

The third, and final, formation alert on this system was issued at 240930Z after convective activity associated with the circulation underwent a marked increase in intensity and organization. Continued intensification, evident from satellite imagery, combined with synoptic reports indicating the presence of 25-30 kt (13-15 m/s) winds, prompted the issuance of the first warning of the 1983 season at 241830Z.

Tropical Storm intensity was reached 12 hours later as Sarah drifted northwestward toward Vietnam. Figure 3-01-1 shows Sarah near maximum intensity off the coast of Vietnam. Further intensification was prevented by intense vertical shear--satellite-derived winds up to 45 kt (23 m/s) over the system--which displaced Sarah's convection to the west.

Under the effects of this hostile shearing environment, Sarah was not able to maintain vertical organization and weakened while approaching the coast of Vietnam. The final warning was issued at 260300Z as Sarah, a fully exposed low-level circulation, moved inland north of Hue and dissipated rapidly.

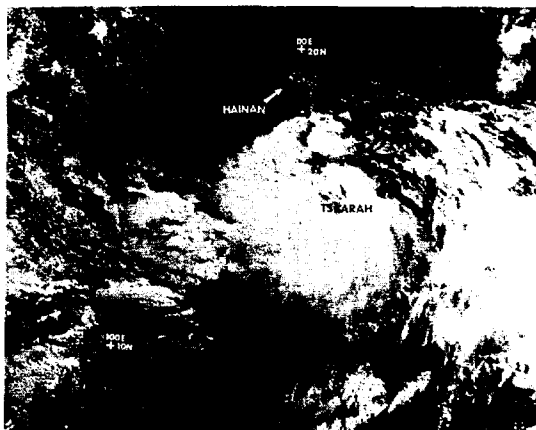


Figure 3-01-1. Tropical Storm Sarah at maximum intensity approaching the coast of Vietnam.